CHAPTER 1.0

INTRODUCTION

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1.0 INTRODUCTION

This Draft Environmental Impact Report (DEIR) has been prepared by the California Department of Water Resources (DWR) for the relicensing of the hydroelectric component of Oroville Facilities Federal Energy Regulatory Commission (FERC) Project No. 2100 (Oroville Facilities). In compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.), this DEIR discloses environmental impacts and recommends mitigation measures related to the Oroville Facilities relicensing. This chapter describes the purpose and structure of the DEIR and explains how it will be used in the decision making process. Chapter 1 also includes information regarding public participation and document availability.

The Oroville Facilities—previously known as the Feather River Project or the Oroville Division, State Water Facilities—are located on the Feather River in the Sierra Nevada foothills in Butte County, California. Oroville Dam is located 5 miles east of the City of Oroville and about 130 miles northeast of San Francisco. The Oroville Facilities were developed as part of the State Water Project (SWP), a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants designed to store and distribute water to supplement the needs of urban and agricultural water users in both northern and southern California, the San Francisco Bay Area, the San Joaquin Valley, and the central coast region of the state. As part of the SWP, the Oroville Facilities are also operated for flood management, power generation, water quality improvement in the Sacramento–San Joaquin Delta, recreation, and fish and wildlife enhancement.

1.1 CEQA, NEPA, AND THE PDEA PROCESS

The Oroville Facilities are operated in part pursuant to a license issued by FERC. The original license for the Oroville Facilities, issued on February 11, 1957, expired on January 31, 2007. DWR, through the Alternative Licensing Procedure (ALP), is seeking a new federal license from FERC to continue generating hydroelectric power while continuing to meet existing commitments and comply with laws and regulations pertaining to water supply, flood control, the environment, and recreational opportunities. The Oroville Facilities are currently operating under an annual license issued by FERC effective February 1, 2007. If a new license is not issued on or before January 31, 2008, this annual license will be renewed automatically.

Under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's (CEQ's) NEPA regulations (Title 40 of the Code of Federal Regulations (CFR), Section 1500 et seq. (i.e., 40 CFR 1500 et seq.)), federal agencies are required to evaluate the environmental effects of an action, including feasible alternatives, and identify mitigation measures to minimize adverse effects when they propose to carry out, approve, or fund a project that may have a significant effect on the environment. FERC, as the federal lead agency, must comply with NEPA and released a draft environmental impact statement (DEIS) for the Oroville Facilities on September 29, 2006. Other federal agencies may rely on FERC's prepared DEIS for approval of individual projects.

As part of the ALP, DWR developed a number of study plans, completed the studies described in the plans, and prepared a Preliminary Draft Environmental Assessment (PDEA) based on study results to determine the environmental effects of the project and alternatives for consideration in the new license. The PDEA provided FERC with the analysis required under NEPA in support of the relicensing. FERC used the information provided in the PDEA to compile its DEIS, released for public review on September 29, 2006. The PDEA also provided analysis appropriate for inclusion in this DEIR.

The PDEA for the Oroville Facilities presented the analysis and conclusions reached during the evaluation of three alternatives—the No-Action Alternative, the Proposed Action, and Alternative 2—along with supplemental information on relevant studies, data, and methodology included as appendices. The DEIS produced by FERC analyzed three alternatives: the No-Action Alternative, DWR's Proposal (the ALP Settlement Agreement (SA) with the exception of Appendix B sections), and a FERC Staff Alternative (modifications to DWR's proposal).

Section 15126.6(a) of the State CEQA Guidelines requires that an EIR describe and evaluate a reasonable range of alternatives that would feasibly attain most of the basic project objectives and would avoid or substantially lessen any significant impact of the project as proposed. A range of reasonable alternatives is analyzed to define the issues and provide a clear basis for choice among the options. CEQA requires that the lead agency consider alternatives that would avoid or reduce one or more of the significant impacts identified for the project in the EIR. The State CEQA Guidelines state that the range of alternatives required to be evaluated in an EIR is governed by the "rule of reason"; the EIR needs to describe and evaluate only those alternatives necessary to permit a reasonable choice and to foster informed decision making and informed public participation (Section 15126.6(f)). Consideration of alternatives focuses on those that can either eliminate significant adverse environmental impacts or reduce them to less-than-significant levels; alternatives considered in this context may include those that are more costly and those that could impede to some degree the attainment of all the project objectives (Section 15126(b)). CEQA does not require alternatives to be evaluated in the same level of detail as the proposed project.

This DEIR considers three alternatives: the No-Project Alternative, the Proposed Project, and the FERC Staff Alternative described in the DEIS. Pursuant to Section 15125(a) of the CEQA Guidelines, this DEIR considers the physical presence of the Oroville Facilities and the functional interactions of the facilities and operations as of February 25th, 2003 as the baseline for analyzing the environmental impacts of the Proposed Project and FERC Staff alternative. This document satisfies the CEQA requirements to disclose potential environmental impacts and recommend mitigation measures related to the Proposed Project.

1.1.1 Type of EIR

This document is structured as a Programmatic EIR, consistent with California Public Resources Code Sections 21093 and 21094 and 14 California Code of Regulations (CCR) Sections 15152 and 15168. The program-level analysis considers the broad

environmental effects of the overall Proposed Project, which is the SA, and based on this program-level analysis, this DEIR identifies performance standards (e.g., Best Management Practices (BMPs), measures to protect biological and visual resources, and mitigation measures that would apply to all subsequent, future actions under the Proposed Project. These performance standards would be incorporated into the mitigation monitoring and reporting plan to avoid or reduce impacts to the degree feasible. In addition, the program-level analysis addresses the cumulative impacts of implementation of the Proposed Project and analyzes a reasonable range of alternatives. A No-Project Alternative is also analyzed as required by CEQA.

The Proposed Project considered in this DEIR includes the development and implementation of numerous plans and programs over the next several decades in addition to actions designed for immediate implementation. While some individual actions are well described in the Proposed Project and ripe for analysis, specific details of the numerous plans and programs described in the Proposed Project are unknown at this time. DWR anticipates that additional CEQA documents will be necessary in the future when these plans and programs are finalized. The Programmatic EIR provides the opportunity to examine the entire project generally, with project-specific information included as available.

In addition to the programmatic analysis described above, the DEIR also includes a more detailed project-level analysis of those actions fully described in the SA, primarily within the Recreation Management Plan (RMP). As more fully described in Chapter 3.0, many actions contained within the RMP are sufficiently detailed to allow this DEIR to provide the full and complete environmental review required under CEQA; therefore, no further environmental review will be required for these actions. For the remainder of the actions contained within the SA, DWR anticipates that additional CEQA review will be needed.

1.2 PURPOSE OF THIS DRAFT ENVIRONMENTAL IMPACT REPORT

The primary purpose of a DEIR is to identify and publicly disclose any potential significant environmental impacts that may result from implementation of a proposed project and to identify feasible alternatives, mitigation measures, and modifications to the project that would reduce those impacts. DWR, as lead agency under CEQA, has determined that preparation and certification of an EIR is required before approval of the Proposed Project, which is implementation of the *Settlement Agreement for Licensing of the Oroville Facilities* (SA) signed March 21, 2006. The information in this DEIR will also be used for the purposes described below.

1.2.1 State Water Quality Certification

DWR is required to obtain water quality certification for the Proposed Project from the State Water Resources Control Board (SWRCB) under Section 401 of the Clean Water Act. The Section 401 certification process is subject to CEQA compliance; therefore, the SWRCB can use the information in this DEIR, and subsequent final environmental impact report (FEIR), to prepare terms and conditions to be included in their future

Water Quality Certificate when issued. State water quality certification is one of the necessary prerequisites before FERC can issue a new license for the Oroville Facilities. In issuing its water quality certification, the SWRCB certifies that the Proposed Project will comply with specified provisions of the Clean Water Act, including water quality standards that are developed pursuant to state law and in satisfaction of Clean Water Act Section 303 (33 U.S. Code 1313).

Pursuant to Section 303, the Central Valley Regional Water Quality Control Board has adopted and the SWRCB has approved *The Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan) (Central Valley RWQCB 2004). The Basin Plan designates or establishes beneficial uses within specified waters to be protected, establishes water quality objectives to reasonably protect those uses, and sets forth a program of implementation needed for achieving the objectives.

1.2.1.1 Beneficial Uses Identified in the Basin Plan for the Project Area

The Basin Plan identifies the waters of the Oroville Facilities as Lake Oroville, the Diversion Pool, Thermalito Forebay, Thermalito Afterbay, and the Fish Barrier Pool. The Basin Plan beneficial uses for any specifically identified water body generally apply to its tributary streams as well. The beneficial uses for the Oroville Facilities are municipal and domestic supply, irrigation, power, water contact recreation, non-contact water recreation, warm water and cold water habitat, warm water and cold water spawning habitat, and wildlife habitat. The beneficial uses for the Feather River from the Fish Barrier Dam to the Sacramento River are municipal and domestic supply, irrigation, contact recreation, canoeing and rafting, non-contact recreation, warm freshwater and cold freshwater habitat, warm water and cold water migration, warm water and cold water spawning, and wildlife habitat (Table II-1 of the Basin Plan).

Beneficial Uses at the Oroville Facilities

The Basin Plan identifies the following beneficial uses of project waters:

- **Municipal and Domestic Supply—**Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.
- **Agricultural Supply—**Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- **Hydropower Generation—**Use of water for hydropower generation.
- **Water Contact Recreation—**Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

- **Non-contact Water Recreation—**Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.

- **Warm Freshwater Habitat—**Uses of water that support warm water ecosystems including, but not limited to, preservation and enhancements of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

- **Cold Freshwater Habitat—**Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancements of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

- **Spawning, Reproduction, and/or Early Development (Warm and Cold)—** Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

- **Wildlife Habitat—**Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food resources.

Beneficial Uses from the Fish Barrier Dam to the Sacramento River

The Basin Plan identifies the following beneficial uses for the Feather River from the Fish Barrier Dam to the Sacramento River:

- **Municipal and Domestic Supply—**Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.

- **Agricultural Supply—**Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

- **Water Contact Recreation—**Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, canoeing, rafting, fishing, or use of natural hot springs).

- **Non-contact Water Recreation—**Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating,

hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.

- **Warm Freshwater Habitat—**Uses of water that support warm water ecosystems including, but not limited to, preservation and enhancements of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

- **Cold Freshwater Habitat—**Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancements of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

- **Migration of Aquatic Organisms (Warm and Cold)—**Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.

- **Spawning, Reproduction, and/or Early Development (Warm and Cold)—** Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

- **Wildlife Habitat—**Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food resources.

1.2.1.2 Basin Plan Water Quality Objectives

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) defines water quality objectives as “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area” (California Water Code Section 13050(h)). It also requires the Regional Water Quality Control Board to establish water quality objectives, while acknowledging that it is possible for water quality to be changed to some degree without reasonably affecting beneficial uses. In establishing water quality objectives, the Regional Water Quality Control Board must consider, among other things, past, present, and probable future beneficial uses, environmental characteristics of the hydrographic unit, water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area, and economic considerations. California water quality standards consist of both beneficial uses and the water quality objectives based on those uses (Central Valley RWQCB 2004).

Water quality objectives for surface waters listed in the Basin Plan include standards for bacteria, chemical constituents, color, dissolved oxygen, floating material, methylmercury, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

1.2.2 Compliance with the California Endangered Species Act

In addition to providing information for Section 401 water quality certification, this DEIR also provides the needed information for the California Department of Fish and Game (DFG) to support compliance with the California Endangered Species Act (CESA).

1.3 PROJECT DECISION MAKING

The SA, which was signed by many stakeholders representing local interests and agencies, non-governmental organizations (NGO), and State and federal agencies who participated in the Oroville Facilities (P-2100) relicensing collaborative, is reflected in the Proposed Project. The SA is the product of 6 years of collaborative development and review. The public and agency review of the DEIR could result in comments that may result in refining the Proposed Project prior to certifying an FEIR. As the CEQA Lead Agency, DWR has the authority to certify the FEIR. DWR will use the FEIR and any supplemental CEQA documents to make all necessary decisions for acceptance and implementation of the new FERC Project License and implementation of the SA.

The DEIR and FEIR will be forwarded to the stakeholders who entered into the SA for their consideration in connection with their responsibilities. State Responsible and Trustee Agencies, as defined by State CEQA Guidelines Section 15386, will also receive a DEIR and FEIR. SWRCB and California Department of Boating and Waterways are considered State Responsible Agencies; DFG and the California Department of Parks and Recreation (DPR) are Trustee Agencies. The State Clearinghouse will post notice regarding the availability of the DEIR and FEIR. After FEIR certification and acquisition of a 401 Water Quality Certification from the SWRCB, it is expected that FERC will issue a new license to operate the Oroville Facilities.

1.4 ORGANIZATION OF THIS DRAFT ENVIRONMENTAL IMPACT REPORT

This DEIR is organized as follows:

Chapter 1.0, Introduction, describes the purpose and structure of the document, explains how it will be used in the decision making process, and includes information regarding public participation and document availability.

Chapter 2.0, Objectives, Scoping, and Support for the Proposed Project, describes the needs and commitments related to power, water supply, flood management, recreation, and environmental benefits. This chapter also describes the ALP process including scoping, post-application efforts, and support for the SA.

Chapter 3.0, Description of Existing Facilities and Operations, the Proposed Project, and Alternatives, provides an overview of the existing Oroville Facilities as well as current operations, environmental commitments, and programs that would continue under the No-Project Alternative. This chapter also describes the Proposed Project (SA), the FERC Staff Alternative, and alternatives considered but eliminated from further evaluation.

Chapter 4.0, Environmental Setting, describes the affected environment under Existing Conditions.

Chapter 5.0, Environmental Impacts, describes the impacts on geology, soils, and paleontological resources; surface and groundwater quantity and quality; aquatic resources; terrestrial resources; land use; recreational resources; cultural resources; population, housing, and public services; environmental justice; aesthetic resources (visual resources and noise); air quality; agricultural resources; transportation and traffic; and public health and safety.

Chapter 6.0, Other Statutory Requirements, describes growth inducement, cumulative impacts, irreversible and/or unavoidable effects, the relationship between short-term uses of the environment and maintenance, and enhancement of long-term productivity.

Chapter 7.0, Regulatory Permits, Approvals, and Authorities Related to Relicensing the Oroville Facilities, lists and describes the regulations and constraints affecting the Proposed Project.

Chapter 8.0, Contributors and Reviewers, lists the contributors to this document, including those who wrote and reviewed sections and those who composed graphics.

Chapter 9.0, Distribution List, lists those stakeholders, NGOs, federal agencies, State agencies, and private citizens who have received a copy of this document.

Chapter 10.0, Consultation and Coordination with Applicable Agencies, lists consultation and coordination with applicable agencies.

Chapter 11.0, Literature Cited, provides a list of literature cited in this document, including printed references and websites, as well as personal communications with knowledgeable sources who provided information included in the DEIR.

Appendices (provided on CD)

- Appendix A—*Settlement Agreement for Licensing of the Oroville Facilities*—FERC Project No. 2100, March 2006
- Appendix B—Settlement Agreement Recreation Management Plan, March 2006
- Appendix C—Aquatic Resources Impact Analysis
- Appendix D—Best Management Practices
- Appendix E—Modeling Comparisons

1.5 COMMENTS REQUESTED

The public review period for the DEIR will be 60 days commencing on May 21, 2007, and terminating on July 20, 2007. Please send your written comments to:

Henry "Rick" Ramirez
Program Manager, Oroville Facilities Relicensing
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

When a person or organization who has been consulted with regard to a DEIR fails to comment within the time limits provided by the Lead Agency, the Lead Agency may assume that the person or agency has no comment. Although a lead agency need not respond to late comments, it may choose to do so (State CEQA Guidelines Section 15207).

1.6 PUBLIC HEARING

While CEQA does not require a formal public hearing on a DEIR (State CEQA Guidelines Section 15087(i), DWR intends to hold a hearing in Oroville on June 21, 2007 at 4:00 PM at Kelly Ridge. This type of hearing is typically held to allow the Lead Agency to receive public comments on the DEIR. FERC held a public meeting on the DEIR on November 8, 2006, as required by statute and in accordance with the CEQ NEPA Regulations (40 CFR 1506.6(c)).

1.7 AVAILABILITY OF DEIR AND TECHNICAL STUDY REPORTS; INCORPORATION BY REFERENCE

This DEIR can be viewed at DWR's Oroville Relicensing website at http://orovillerelicensing.water.ca.gov or in the Sacramento or Oroville Public Reference Files at the following locations:

California Department of Water Resources
1416 Ninth Street, Room 338
Sacramento, CA 95814

Oroville Branch of the Butte County Library
1820 Mitchell Avenue
Oroville, CA 95966

The website and public file locations also include the ALP protocols, meeting logistics, summaries of all Plenary Group and work group meetings, the FERC License Application, which includes the PDEA and technical study reports, and the FERC DEIS.

This DEIR relies in part on information collected during Oroville Facilities relicensing studies, which were developed in coordination with stakeholders, including regulatory

agencies. The technical study reports listed below are incorporated by reference as though set forth in full as part of the text of the DEIR.

The Archaeological and Historical Site Inventory at Lake Oroville, Butte County—A Report for the Public—no date

This booklet describes the archaeological resources inventory of the Oroville Facilities area. It presents the background of the area, the methods used, and some of the inventory's results.

Konkow Maidu Tribal Presence in the Lake Oroville Area: An Ethnographic and Ethnohistoric Inventory—no date

This report contains an ethnographic and ethnohistoric inventory of Konkow Maidu cultural resources within the Project area.

Oroville Facilities Relicensing Project Cultural Resources Inventory—Interim Report—January 31, 2003

This report contains a field inventory of cultural resources within the Project area.

Historical Properties Management Plan—Draft 2007

The draft HPMP includes measures to address ongoing effects, protocols for proposed future actions, programs for future archaeological inventory and evaluation, and procedures for inadvertent discoveries and emergency situations.

L-1 Land Use Report (Final Report)—July 2004

This study presents the results of a comprehensive evaluation of existing and planned land uses in the Project area, as well as a brief overview of historical land use that formed the context of current land use planning in the Oroville area.

L-2 Land Management (Final Report)—August 2004

This report identifies the public agencies responsible for managing lands within the Project area, describes the management direction of these lands according to land use and resource management plans, and provides a discussion of the existing management practices of each responsible agency.

L-3 Comprehensive Plans Evaluation (Final Report)—May 2004

This report contains a comprehensive review of land use and resource management plans within the Project area and an analysis of whether the Project is consistent with those plans.

L-4 Aesthetic/Visual Resources Report (Final Report)—July 2004

This report inventories and characterizes the aesthetic/visual environment of the Project area and includes an assessment of the compatibility of Project facilities and operations with the Project's aesthetic/visual environment.

L-5 Fuel Load Management Evaluation (Final Report)—May 2004

This report summarizes existing data on the current fuel load conditions in the Project area, presents information on relevant fuel load reduction and management techniques, and summarizes the programs and policies of other local agencies' land management reports.

W-1 Project Effects on Water Quality Designated Beneficial Uses for Surface Waters (Final Report)—September 2004

This study evaluates the physical, chemical, and biological integrity of water within the Oroville Facilities and other Project-affected surface waters.

W-2, Phase 1 Contaminant Accumulation in Fish, Sediments, and the Aquatic Food Chain (Draft Report)—January 2004

This report presents the results of Phase 1 of the study that measured the significance of contamination in fish, crayfish, and sediments in project waters, and evaluated the effect on prey species and humans.

W-3 Recreational Facilities and Operations Effects on Water Quality; Year 1 Progress Report—August 2004

This report presents the progress of monitoring programs that were designed to target specific recreational facilities and activities with the potential to introduce contaminants into Project waters.

W-3 Recreational Facilities and Operations Effects on Water Quality, Task 1: Effects of Current Recreation Facilities and Operations; Task 1A Identification of Potential Effects to Water Quality (Interim Report)—October 10, 2002

This report identifies the potential effects to water quality from recreational facilities and their associated activities.

W-5, Task 1 Project Effects on Groundwater (Draft Report)—March 2004

This report analyzes the potential effects of Thermalito Forebay and Thermalito Afterbay upon local groundwater level and quality.

W-5 Project Effects on Groundwater; Task 1, Phase 1 Inventory Existing Wells and Assessment of Existing Groundwater Data and Current Groundwater Monitoring Activities (Draft Report)—May 14, 2003

This report presents an inventory of existing wells in the vicinity of Thermalito Afterbay, and includes an assessment of existing groundwater data and current groundwater monitoring activities.

W-5, Task 2 Project Effects on Groundwater (Draft Report)—November 2004

This study analyzes the hyporheic connectivity between the Feather River and ponds within the Oroville Wildlife Area (OWA).

W-6 Project Effects on Temperature Regime (Draft Final Report)—July 2004

This study evaluates the effects of Project facilities and operations on the temperature regime of Project waters and waters affected by the Project, and the ability of the Project to meet the temperature requirements for protection of beneficial uses, including agriculture, fish, and other aquatic resources.

W-7 Land and Watershed Management Effects on Water Quality (Progress Report)—January 2003

This report reviews the potential effects of land and watershed management activities on project waters.

W-7 Land and Watershed Management Effects on Water Quality Task 1: Effects to Water Quality from Ongoing Land Uses and Management; Task 1B: Evaluation of Potential Effects to Water Quality—August 2004

This report evaluates the effects on water quality from ongoing land uses and management activities.

W-9 Project Effects on Natural Protective Processes—June 2004

This report assesses the effectiveness of natural protective processes on water quality within the Project area.

T-1 Effects on Project Operations and Features on Wildlife and Wildlife Habitat (Final Report)—April 2004

This report identifies and evaluates potentially significant impacts on wildlife populations and habitat related to current and future project operations and maintenance. The report identifies opportunities to enhance, minimize, avoid, or mitigate potentially significant impacts.

T-2 Project Effects on Special Status Wildlife Species (Final Report)—January 2004

This study provides the information necessary to evaluate the potential impacts of the Project on special status wildlife species within the biological and environmental assessment processes.

T-2 Project Effects on Special Status Plant Species (Final Report)—March 2004

This report analyzes the Project's effects on special status plant species within the Project boundary. The scope of study for each species focused on areas of suitable habitat within the study area that may be affected by Project activities. Habitat for federally listed or State listed species was completely surveyed.

T-3/5 Project Effects on Riparian Resources, Wetlands, and Associated Floodplains (Draft Final)—July 2004

This report analyzes the effects of the Project on riparian resources, wetlands, and associated floodplains within the project area.

T-4 Biodiversity, Vegetation Communities, and Wildlife Habitat Mapping (Final Report)—December 2003

This report contains maps delineating vegetative cover/land use and habitat data. Suitable habitat and presence/absence data for special status plant and animal species are included in this report.

T-6 Interagency Wildlife Management Coordination and Wildlife Management Plan Development (Interim Report)—January 2004

This report analyzes opportunities for improved interagency wildlife coordination among the principal land management and wildlife regulatory agencies with responsibilities within the Project area.

T-7 Project Effects on Noxious Terrestrial and Aquatic Plant Species (Final Report)—June 2004

This report reviews and maps existing non-native invasive plant species which can adversely impact native plant species and communities and wildlife habitat through competition as well as impact downstream natural and agricultural resources.

T-8 Project Effects on Non-Native Wildlife (Final Report)—September 2003

This report provides information concerning potential management practices for population control of non-native species as appropriate to meet an agency's land and wildlife management goals.

T-9 Recreation and Wildlife (Final Report)—June 2004

This report evaluates the potential impacts associated with recreation on wildlife within the Project vicinity.

T-10 Effects of Project Features, Operations, and Maintenance on Upland Plant Communities (Final Report)—August 2004

This report analyzes current and potential future operations of the Oroville Facilities that may impact upland plant communities, including rare or unique community types.

T-11 Effects of Fuel Load Management and Fire Prevention on Wildlife and Plant Communities (Final Report)—October 2003

This study analyzes the potential benefits and impacts that possible fuel load management actions would have on wildlife and plant communities.

G-1 Effects of Project Operations on Geomorphic Processes Upstream of Oroville Dam (Final Report)—April 2004

This report assesses the channel resources above Lake Oroville and within the Fluctuation Zone, and includes a calculation of the total sediment in storage within Lake Oroville.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 1.1 Resources and References—June 2004

This report is one of eight reports that fulfill the scope of work for SP-G2.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 1.2 Physiographic Setting and Mesohabitat—April 2004

This report presents the sub-tasks, methodology, and results completed to date. It presents the physiographic “framework” for the overall study. In effect it is the foundation on which the other study plan tasks and corresponding reports are based.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 2 Spawning Riffle Characteristics—August 2004

This report includes the methodology, results, and conclusions of a Chinook salmon spawning riffle quality evaluation.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 3—Channel Cross-Sections and Photography; Task 4—Monitoring—September 2004

This report identifies the hydraulic, geomorphic, and sediment transport changes that have occurred as a result of Oroville Dam. The report also considers the effect of these

changes on salmonid spawning riffles, flooding, riparian vegetation, riparian habitat, and river habitat.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 5—Dam Effects on Channel Hydraulics and Geomorphology

This report includes flow exceedance calculations, flood frequency calculations, and Indicators of Hydraulic Alternation analysis on three Feather River gauges.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam Task 8—Summary and Conclusions—July 2004

This report presents the sub-tasks, methodology, and results. It presents the hydraulic, geomorphic, and sediment transport changes that have occurred as a result of human activities and the Oroville Facilities.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 6—Channel Meanders and Bank Erosion Monitoring—July 2004

This report presents the sub-tasks, methodology, and results completed to date concerning the monitoring of channel meanders and bank erosion.

G-2 Effects of Project Operations on Geomorphic Processes Downstream of Oroville Dam; Task 7—Hydraulic and Sediment Transport Modeling with Fluvial-12 (Draft Report)—March 2004

This report identifies and evaluates the ongoing and future effects of the construction of Oroville Dam on channel morphology and sediment transport in the Lower Feather River.

Paleontologic Resources in the Vicinity of FERC Project 2100 (Oroville Reservoir and Lower Feather River): Literature-Based Inventory and Significance Assessment—January 2005

This study provides baseline data on known fossil localities within the Project area.

Fluvial Modeling Study of Feather River Responses to Oroville Dam and Related Issues—February 2004

This report presents a modeling study of the effects on the Feather River by Oroville Dam.

F-1 Tasks 1 and 2 Evaluation of Project Effects on Non-Fish Aquatic Resources (Final Report)—August 2004

This report documents the status of existing aquatic macroinvertebrate and plankton communities based on field study results, and provides a description of potential environmental effects on these resources based on a review of the existing literature

(Task 1). The report also presents an evaluation of the current and potential future operational effects of the Oroville Facilities on aquatic macroinvertebrates, phytoplankton, and zooplankton residing in the Project reservoirs and river habitats within the study area (Task 2).

F-2 Evaluation of Project Effects on Fish Disease—June 10, 2004

This report presents an evaluation of the effects of ongoing and future Project operations on the establishment, transmission, extent and control of infectious hematopoetic necrosis, bacterial kidney disease, and other significant fish diseases in the Feather River basin.

F-2, Task 1 and 2 Evaluation of Project Effects on Fish Disease (Draft)—March 20, 2003

This report reviews existing information and evaluates the Project's effects on the establishment, transmission, and control of fish diseases in Project waters. The report also evaluates the potential for significant fish diseases to move downstream of the Project waters.

F-3.1, Task 1A Assessment of Potential Fish Passage Impediments Above Lake Oroville's High Water Mark (Final Report)—May 2004

This report identifies and characterizes potential fish passage barriers for inland salmonids, anadromous salmonids, and sturgeon upstream of Lake Oroville. The report provides information regarding the ability of the fish occurring within Lake Oroville to access habitat upstream of Lake Oroville and to interact with the fish communities in the tributaries upstream of Lake Oroville.

F-3.1, Task 1B Fish Species Composition in Lake Oroville's Upstream Tributaries (Final Report)—December 2004

This report provides information regarding fish species composition in the tributaries upstream of Lake Oroville and the effects of project operations on species composition.

F-3.1, Task 1C; F-3.2 Task 4A; GIS Fish Habitat Components—June 2003

This report contains Geographic Information System (GIS) maps showing fish habitat components.

F-3.1, Task 2A, 3A Fish Species Composition: Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay—June 30, 2003

This report identifies the fish species composition in Lake Oroville, the Thermalito Diversion Pool, and Thermalito Forebay, and represents Tasks 2A and 3A of the SP-3.1 study entitled SP-3.1 Evaluation of the Project Effects on Fish and Their Habitat within Lake Oroville, its Upstream Tributaries, and Thermalito Complex, and the OWA.

F-3.1, Task 2B Evaluation of the Ability of Lake Oroville's Coldwater Pool to Support Salmonid Stocking Recommendations (Final Report)—March 2003

This report evaluates whether there is sufficient cold water in Lake Oroville to support current annual salmonid stocking goals of 170,000 yearling equivalent salmon.

F-3.1, Task 2C Evaluation of Lake Oroville Water Surface Elevation Reductions on Bass (Micropterus spp) Spawning Success (Final Report)—December 6, 2002

This report evaluates the effects of water surface elevation fluctuations on spawning of bass in Lake Oroville.

F-3.1, Task 2D Management Practices and Monitoring Studies for White Sturgeon (Final Report)—December 2002

This report summarizes information regarding management practices from reservoirs that are actively managed for sturgeon.

F-3.1 Task 3B, 3C Project Operations Influencing Fish habitat and Water Quality in the Thermalito Diversion Pool and the Thermalito Forebay (Final Report)—May 2004

This report looks at the influence of Project operations on fish habitat and water quality in the Thermalito Diversion Pool and the Thermalito Forebay.

F-3.1 Task 4A Fish Species Composition and Juvenile Bass Recruitment in the Thermalito Afterbay (Final Report)—December 2004

This report describes the fish species composition and evaluates juvenile bass recruitment in Thermalito Afterbay.

F-3.1, Task 4B Characterization of Cold Water Pool Availability in the Thermalito Afterbay (Final Report)—December 2003

This report evaluates whether sufficient cold water exists in Thermalito Afterbay to support a year-round cold water fishery.

F-3.1, Task 4C Evaluation of Water Surface Fluctuations on Bass Nest Dewatering and Characterizations of Inundated Littoral Habitat in the Thermalito Afterbay (Final Report)—August 2004

This report estimates the percentage of bass nests subject to dewatering in Thermalito Afterbay. Additionally, the report assesses the availability of inundated littoral habitat for black bass juvenile rearing in Thermalito Afterbay.

*F-3.1 Task 5A One-Mile Pond Fish Species Compos*ition—November 2003

This study identifies the fish species composition in the OWA and represents task 5A of the SP-F3.1 study entitled SP-F3.1 Evaluation of Project Effects on Fish and Their

Habitat within Lake Oroville, its Upstream Tributaries, the Thermalito Complex, and the OWA. A listing of the fish species is presented along with a general perspective as to the relative abundance of these species, and the relationship of these fish species compositions to existing fishery management programs is also discussed.

F-3.1 Task 5B Characterization of Fish Habitat in One-Mile Pond (Interim Report)—January 2004

This report analyzes the availability of warm water fish habitat in One-Mile Pond.

F-3.2 Task 1, F-21 Task 2 Fish Distribution in the Feather River Below the Thermalito Diversion Dam to the Confluence with the Sacramento River (Draft Report)—January 2003

This report establishes an informational baseline describing the current knowledge of fish distribution in the Feather River.

F-3.2, Task 1,4,5 Comparison of Fish Distribution to Fish Habitat in the Lower Feather River (Final)—August 2004

This report documents the distribution of non-salmonid fish species in the lower Feather River from the Thermalito Diversion Dam to the confluence of the Sacramento and Feather Rivers (Task 1), identifies fish habitat in the lower Feather River as it pertains to species-specific habitat requirements (Task 4), evaluates potential project effects on non-salmonid fish species, and integrates fish species distribution information and habitat requirements (Task 5).

F-3.2 Task 2, F-21 Task 1 Literature Review of Life History and Habitat Requirements for Feather River Fish Species (Interim Report)—January 2003

This report provides an information database regarding lifestage characteristics and habitat requirements of fish species in the Feather River.

F-3.2 Task 3A Final Assessment of Potential Sturgeon Passage Impediments—September 2003

This report provides the final assessment of potential sturgeon passage impediments in the Feather River.

F-3.2 Task 3A Identify Green Sturgeon Distribution and Habitat Use Patterns—December 2002

This repot describes Task 3A, which involved divers searching for sturgeon downstream of potential migration barriers in the Feather River, as well as surveys for sturgeon eggs at four stations in the Low Flow Channel.

F-3.2 Task 3A Final Assessment of Sturgeon Distribution and Habitat Use—December 15, 2003

This report assesses the distribution, spawning locations and timing, habitat usage, residence time, and outmigration patterns of sturgeon in the lower Feather River.

F-3.2, Task 3B Assessment of Potential Project Effects on Splittail Habitat (Final Report)—July 2004

This report assesses potential Project effects on splittail habitat availability during the splittail spawning, egg incubation, and initial rearing period.

F-5/7 Evaluation of Potential Effects of Fisheries Management Activities on ESA-Listed Fish Species (Final Report)—May 2004

This report analyzes the potential effects of fisheries management activities on fish species listed under the Endangered Species Act and listed by DFG as fish Species of Special Concern downstream of the project in the Feather River.

F-5/7 Task 2 Achievement of Current Stocking Goals—September 2004

This report evaluates whether the current stocking goals for Lake Oroville and Thermalito Forebay had been achieved as of September 2004.

F-5/7 Task 3 Evaluation of Interactions Between the Lake Oroville Fishery and Upstream Tributary Fisheries (Final Report)—December 2003

This report evaluates potential interactions between the Lake Oroville fishery and fisheries in the tributaries upstream of Lake Oroville.

F-8 Transfer of Energy and Nutrients By Anadromous Fish Migrations (Final Report)—August 1, 2003

This report investigates the potential impact of the elimination of anadromous salmonid spawning runs on ecosystem productivity of the historical Feather River tributaries upstream of Lake Oroville.

F-9 The Effects of the Feather River Hatchery on Naturally Spawning Salmonids (Draft Report)—November 2004

This report describes the physical, institutional, biological, and fisheries context in which the Feather River Fish Hatchery has operated, and will operate. The report examines some of its potential impacts on Central Valley Chinook salmon and steelhead.

F-9, Phase 1 Evaluation of Project Effects on Natural Salmonid Populations—Interim Literature Review—March 24, 2003

This report examines the available literature regarding the effects of the Feather River Fish Hatchery on naturally spawning salmonids.

F-10 Task 1C Evaluation of Flow-Related Physical Impediments in the Feather River Below the Fish Barrier Dam (Final Report)—January 2003

This report evaluates potential relationships between flow and flow-related physical passage impediments to adult salmonid immigration in the Feather River.

F-10, Tasks 1D and 1E Evaluation of Oroville Facilities Operations on Water Temperature Related Effects on Pre-Spawning Adult Chinook Salmon and Characteristics of Holding Habitat (Final Report)—June 2004

This report identifies and characterizes adult early up-migrant (spring-run) Chinook salmon (*Oncorhynchus tshawytscha*) holding habitat and use patterns in the lower Feather River below the Thermalito Diversion Dam (Task 1E). The report also evaluates the effects of Oroville Facilities operations on water temperature–related effects on pre-spawning salmonid adult production (Task 1D).

F-10 Task 1E Pre-spawning Chinook Salmon Migration Patterns and Holding Characteristics (Interim Report)—March 22, 2004

This report evaluates water temperatures, depth, and migration patterns of pre-spawning adult Chinook salmon in the Feather River below the Fish Barrier Dam.

F-10 Task 1E Identification and Characterization of Early Up-Migrant Chinook Salmon Holding Habitat and Habitat Use Patterns (Interim Report)—April 2003

This report includes a literature review to determine suitable water temperature, dissolved oxygen concentration, depth, substrate, and water velocity for adult spring - run Chinook salmon holding habitat. The report also includes an analysis that was conducted to determine the existence, location, and distribution of suitable holding habitat in the Feather River below Oroville Dam.

F-10 Task 2A Evaluation of Spawning and Incubation Substrate Suitability for Salmonids in the Lower Feather River (Final Report)—June 2004

This report evaluates spawning and incubation substrate suitability for salmonids in the lower Feather River.

*F-10 Task 2B 2003 Lower Feather River Steelhead (*Onchorhynchus mykiss*) Redd Survey*—July 10, 2003

This report includes thirteen weekly redd surveys performed between January 6 and April 3, 2003.

F-10 Task 2B Steelhead Spawning Methods (Interim Report)—May 2003

This report includes a literature review and evaluation to identify opportunities for improvement in the methods to quantify steelhead spawning in the Feather River.

F-10, Task 2B Evaluation of Potential Effects of Oroville Facilities Operations on Spawning Chinook Salmon (Final)—March 2004

This report evaluates the effects of the Oroville Facilities operational procedures on spawning Chinook salmon in the lower Feather River.

F-10, Task 2C Evaluation of the Timing, Magnitude, and Frequency of Water Temperatures and Their Effects on Chinook Salmon Egg and Alevin Survival (Final Report)—July 2004

This report evaluates the effects of Oroville Facilities operations on Chinook salmon egg and alevin survival in the lower Feather River.

F-10 Task 2D Evaluation of Flow Fluctuation Effects on Chinook Salmon Redd Dewatering in the Lower Feather River (Final Report)—July 2004

This report evaluates the effects of flow fluctuation in the lower Feather River on salmonid redd de-watering.

F-10 Task 3A Distribution and Habitat Use of Juvenile Steelhead and other Fishes of the Lower Feather River (Final Report)—April 2004

This report determines the characteristics of the wild steelhead population and identifies factors potentially limiting steelhead success in the lower Feather River.

F-10 Task 3A Distribution and Habitat Use of Steelhead and Other Fishes in the Lower Feather River, 1999–2001 (Interim Report)—January 22, 2003

This report determines the characteristics of the wild steelhead population and identifies factors potentially limiting steelhead success in the lower Feather River.

F-10 Task 3B Growth Investigations of Wild and Hatchery Steelhead in the Lower Feather River—February 2004

This report describes the results of an enclosure and mark recapture study in the Feather River LFC to assess growth, survival, and movement of juvenile steelhead.

*F-10 Task 3B Growth Investigations of Wild Juvenile Steelhead (*Onchorhynchus mykiss*) in the Feather River Using Mark and Recapture Techniques (Interim Report)*—June 17, 2003

This report investigates site fidelity and growth of wild rearing juvenile steelhead (*Oncorhynchus mykiss*) through mark-and-recapture sampling.

F-10 Task 3B Steelhead Rearing Temperatures (Interim Report)—July 2003

This report includes a literature review and evaluation to identify temperature ranges that are suitable for steelhead fry and juvenile rearing in the lower Feather River.

F-10 Task 3C Redd Dewatering and Juvenile Steelhead and Chinook Salmon Stranding in the Lower Feather River 2002–2003 (Interim)—June 17, 2003

This report determines the number of redds de-watered by reductions in flow; identifies potential ponding areas; determines the relative abundance of stranded salmonids; and determines the biological significance of stranding/redd dewatering losses to the existing population of salmonids in the river. The report summarizes activities from the 2002–2003 sampling season.

F-10 Task 3C Juvenile Steelhead and Chinook Salmon Stranding in the Lower Feather River 2001–2003 (Final Report)—August 2004

This report identifies potential ponding areas; determines the relative abundance of stranded salmonids; and determines the biological significance of stranding losses to the existing population of salmonids in the lower Feather River.

F-10 Task 4A Literature Review of Devices used for Enumeration of Juvenile Steelhead (Review Draft)—January 2003

This report includes a literature review of devices used to enumerate outmigrating juvenile steelhead, and includes a brief description of each device, a list of advantages and disadvantages associated with each device, a summary of several case studies involving use of the devices, and conclusions regarding the applicability of the devices for use in enumerating outmigrant juvenile steelhead in the Feather River.

F-10 Task 4A River Flow Effects on Emigrating Juvenile Salmonids in the Lower Feather River—December 2003

This report includes a literature review and an analysis of empirical data collected on the lower Feather River to determine the timing of emigration and the potential effects of river flow on emigrating juvenile salmonids.

F-10 Task 4B Timing, Thermal Tolerance Ranges, and Potential Water Temperature Effects on Emigrating Juvenile Salmonids in the Lower Feather River—October 2003

This report includes a literature review to determine the timing of emigration, the thermal tolerance ranges, and the potential effects of water temperatures on emigrating juvenile salmonids in the lower Feather River.

F-15, Task 2; F-3.1, Task 1C Inventory of Potentially Available Habitat and Distribution of Juvenile and Adult Fish Upstream from Lake Oroville (Final)—June 2004

This joint report inventories and assesses the suitability of available habitat upstream of Lake Oroville for adult and juvenile anadromous salmonids, and describes the distribution of species currently present.

F-15, Task 3 Evaluation of Methods and Devices Used in the Capture, Sorting, Holding, Transport, and Release of Fish (Final)—June 2004

This report evaluates the feasibility of moving anadromous salmonids and other targeted migratory fish species, specifically green sturgeon, past the Oroville Facilities.

F-15, Task 4 Fish Passage Model (Final)—January 2004

This report provides a fish passage assessment model to evaluate various combinations of alternative fish passage program elements and goals for the Oroville Facilities Relicensing environmental documentation.

F-16 Phase 1 Evaluation of Project Effects on Instream Flows and Fish Habitat (Phase 1 Report)—July 17, 2002

This report presents an evaluation of Phase 1 of the study of Project effects on instream flows and fish habitat. DWR and other participating agencies have been collecting physical and biological data on the Feather River downstream of Oroville Dam for many years. One aspect of these studies is the application of the Instream Flow Incremental Methodology and its associated PHABSIM (physical habitat simulation) computer models, which create indices describing the physical habitat suitability of alternative instream flow releases. Information gathered from this evaluation included instream flow study plans, data compilations, hydraulic data files, draft results, aerial photographs, fish spawning and rearing observations, and related materials.

F-16 Phase 2 Evaluation of Project Effects on Instream Flows and Fish Habitat (Phase 2 Report)—February 2004

This report presents an evaluation of Phase 2 of the study of Project effects on instream flows and fish habitat. The Oroville Facilities substantially control flow in the Feather River from the Fish Barrier Dam near Oroville to the confluence with the Sacramento River. Minimum flow releases were established by a 1983 agreement between DWR and DFG. DWR and DFG jointly conducted an instream flow study utilizing PHABSIM. Principal activities of Phase 2 included placing supplemental PHABSIM cross-section transects, measuring patterns of depth, velocity, substrate, and cover along the transects; merging old and new data; calibrating revised PHABSIM computer models; and computing updated habitat indexes relating suitable spawning habitat to discharge in the two reaches.

F-21 Task 3 Project Effects on Predation of Feather River Juvenile Anandromous Salmonids (Final Report)—May 2004

This report summarizes existing literature on predation of juvenile anadromous salmonids associated with artificial structures and hydropower project operations in river systems other than the Feather River, and determines the Project's effects on predation of juvenile anadromous salmonids in the Feather River.

F-21 Task 4 Predation PM&E Literature Review (Final Report)—February 2003

This report includes a literature review to summarize predation management and monitoring studies in order to determine their effectiveness and their potential applicability to the Oroville Facilities.

Development of the Feather River Flow-Stage Model—March 14, 2003

This report concerns the study that developed and calibrated a flow-stage model for the Feather River. . The model used the river geometry data from the U.S. Army Corps of Engineers Comprehensive Study and other available source information to develop a model of the Feather River comprising the reach from Oroville Dam to the confluence with Sacramento River, including all the hydraulic structures on the river.

E-3 Report on Evaluation of Potential Generation Improvements (Draft)—May 2004—Executive Summary only

This report on Evaluation of Potential Generation Improvements explores the potential for developing additional generation capacity through hydropower improvements or construction additions to the Oroville Facilities.

E-4 Flood Management Study (Final Report)—November 2004

This report is a compilation and summary of known flood control studies involving the Feather River. It contains 15 sections, various embedded tables and figures, and 2 appendices.

E-7A Oroville Reservoir Coldwater Pool Availability Analysis—May 1, 2003

This report evaluates the amount and availability of the cold water pool in Oroville Reservoir.

R-1 Vehicular Access Study (Final)—September 2003

This report examines vehicular access opportunities and constraints to Project area land and water resources.

R-2 Recreation Safety Assessment (Final)—January 2004

This report presents the results of the Recreation Safety Assessment. The study presents a quantitative and qualitative assessment of public safety as it relates to existing recreation activities within the study area, and develops proposed recommendations by the study plan authors to be considered during the relicensing process.

R-3 Assessment of the Relationship of Project Operations and Recreation (Final)—May 2004

This report determines the impacts of current Project operations and any proposed changes to operation of the Oroville Facilities on recreational use and recreational experiences of visitors engaged in various activities.

R-4 Relationship Assessment of Fish/Wildlife Management and Recreation (Final)—May 2004

This report identifies the effects of fish and wildlife management on providing recreational opportunities within the study area. The report describes the range of fish- and wildlife-related recreational opportunities available in the study area, mainly focusing on the 11,870-acre OWA and the 28,000-acre Lake Oroville State Recreation Area, and summarizes agency roles.

R-5 Assessment of Recreation Areas Management (Final)—June 2004

This report identifies the recreational opportunities provided in the Project area and summarizes the jurisdiction of agencies that are responsible for recreation management. It identifies the recreation management actions needed to maintain or enhance these recreational opportunities, as well as the potential funding mechanisms that could accomplish those actions.

R-6 ADA Accessibility Assessment (Final)—September 2003

This report assesses the degree of adequacy and future accessibility needs for persons with disabilities who may use public recreation facilities within the study area.

R-7 Reservoir Boating (Final)—March 2004

This report is an analysis of reservoir boating within the Project area.

R-8 Recreation Carrying Capacity (Final)—June 2004

This report assesses the types and levels of recreational use in the Project area to determine if use levels are compatible with the capacity of the Project area.

R-9 Existing Recreation Use (Final)—February 2004

This report estimates existing Project-related recreation use, both day and overnight use, at recreation facilities and dispersed recreation use areas within the Project area.

R-10 Recreation Facility Inventory and Condition Report (Final)—September 2003

This report consists of an initial inventory and description of the condition of existing recreation facilities within the Project area boundary. Additionally, a brief examination is provided regarding recreation areas affected by reservoir level. There is a brief discussion about planned facility development in the Project area.

R-11 Recreation and Public Use Impact Assessment (Final)—January 2004

This report includes a qualitative assessment of ecological impacts attributed to recreation and public use at recreation sites and areas in the Project area. The report summarizes the recreation and public use impacts on vegetation, soils, and water quality at Project recreation facilities.

R-12 Projected Recreation Use (Final)—May 2004

This report forecasts the amount of recreation use in the Project area for various intervals throughout the anticipated license period of the Oroville Facilities.

R-13 Recreation Surveys (Final)—December 2004

This report determines Project area recreationists' background characteristics; user preferences for facility and area development; perceptions of crowding; levels of satisfaction; reasons for visiting the area; and reasons for not visiting the area.

R-14 Assessment of Regional Recreation and Barriers to Recreation (Final)—February 2004

This report evaluates regional recreational opportunities in Northern California (and adjacent Nevada) and identifies potential barriers, if any, to increasing existing and future recreational uses within the Project area.

R-15 Recreation Suitability Analysis (Final)—February 2004

This report determines areas suitable for potential new recreation facility development, if needed, consistent with the resource opportunities and constraints of the Project area.

R-16 Whitewater and River Boating Report (Final)—January 2004

This report describes whitewater and river boating activities on the Feather River within the Project area, examines effects of Project operations on boating activities, evaluates solutions to any identified whitewater and river boating issues, and, ultimately, provides

useful information for planning recreational experiences for appropriate water-related activities.

R-17 Recreation Needs Analysis (Final)—June 2004

This report includes a comprehensive list of both overall and site-specific public recreation-related needs in the Oroville Facilities study area. The Recreation Needs Analysis contributes to the development of a new recreation plan for the Oroville Facilities area, or Oroville Facilities RMP. This report synthesizes the major results of the other technical resource recreation studies completed during the relicensing process.

R-18 Recreation Activity, Spending, and Associated Economic Impacts (Final)—May 2004

This report estimates the effects of spending activity generated by current and projected recreation use and operations and maintenance (O&M) of the Oroville Facilities on local business sales, employment, and personal income. The report also provides a better understanding of the relationship between the Oroville Facilities and economic development and growth within the region, particularly focused on the greater Oroville area.

R-19 Fiscal Impacts (Final)—May 2004

This report estimates the effects of economic activity generated by current and projected recreation use and by the O&M of the Oroville Facilities on sales tax revenues, lodging tax revenues, and other tax revenues of local governments, and on local public service costs related to Project-related recreation activity and O&M of the Oroville Facilities. The report also provides a better understanding of the relationship between the level of recreation activity at the Oroville Facilities and resulting levels of public revenues and costs generated for local agencies.

R-18, R-19 Phase 1 Background Report Economic and Fiscal Conditions (Final)—May 2003

This report includes socioeconomic and fiscal data pertaining to the local economy affected by the Oroville Facilities that are useful for (1) developing the community-based models for assessing economic and fiscal effects of the Project; and (2) evaluating the potential effectiveness of alternative enhancement measures to contribute to local economic development.

Phase 2 Background Report Economic and Fiscal Conditions – Recreation and Tourism Economy in Oroville—January 2004

This report analyzes commercial activity in the City of Oroville.

Phase 2 Background Report Economic and Fiscal Conditions—Property Value Analysis Using a Hedonic Property Pricing Model—January 2004

This report evaluates the relationship between the Oroville Facilities and local property values.

Oroville Facilities Relicensing Recreation and Socioeconomics Study Reports Addenda and Errata—January 2005

This document serves as an accompaniment to the 19 Recreation and Socioeconomic Study Reports prepared for the Oroville Facilities Relicensing Collaborative. It addresses factual and significant typographical errors found in the 19 reports since the date each report was published.